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The taxonomy of species globally described in or formerly included in the genus *Elachiptera* and new combinations with *Lasiochaeta* and *Gampsocera* (Diptera: Chloropidae)

Таксономия видов, описанных в роде *Elachiptera* или ранее включенных в него, и новые комбинации с *Lasiochaeta* и *Gampsocera* (Diptera: Chloropidae)

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The taxonomic history for all species of a species-rich genus of the Chloropidae (Diptera) is briefly presented for the first time, by the example of the genus *Elachiptera* Macquart, 1835. Here, all names of the species group ever combined with the generic name *Elachiptera* are listed together with the references and the first pages of their descriptions, their first transfer into the valid genus, their senior and junior synonyms and further important references to their taxonomical status. In addition, all names of the genus group that have ever been associated with these species names are listed together with their type species. Thirty new combinations are introduced in order to transfer species from *Melanochaeta* Bezzi, 1906 (a synonym of *Oscinella* Becker, 1909) to the valid genera *Lasiochaeta* Corti, 1909 and *Gampsocera* Schiner, 1862. The known zoogeographical distribution of each of the 81 valid *Elachiptera* species and 74 valid species in other genera is briefly summarized. Selected exemplary data on larval habitats of *Elachiptera* are discussed.

На примере рода *Elachiptera* Macquart, 1835 впервые кратко рассмотрена история таксономического изучения всех видов для крупного рода из семейства Chloropidae (Diptera). Составлен список всех названий группы вида, когда-либо использовавшихся в сочетании с родовым названием *Elachiptera*; для каждого названия группы вида приводятся ссылки на публикацию с первоописанием, на его первую страницу и на публикацию, в которой название впервые употребляется в сочетании с валидным родовым названием; приводятся старшие и младшие синонимы и важнейшие ссылки, касающиеся таксономического статуса. В дополнение составлен список всех названий группы рода, которые когда-либо использовались в сочетании с этими видовыми названиями; приведены их типовые виды. Предложено 30 новых комбинаций для видов, ранее относимых к роду *Melanochaeta* Bezzi, 1906 (синоним *Oscinella* Becker, 1909), с валидными родовыми названиями *Lasiochaeta* Corti, 1909 и *Gampsocera* Schiner, 1862. Кратко суммированы данные по географическому распространению 81 валидного вида из рода *Elachiptera* и 74 видов, относящихся к другим родам. На отдельных примерах обсуждаются биотопы развития личинок *Elachiptera*.

Key words: review, annotated bibliography, taxonomy, distribution, bionomics, Diptera, Chloropidae, *Elachiptera*, *Gampsocera*, *Javanoscinis*, *Lasiochaeta*, *Melanochaeta*, new combinations

Ключевые слова: обзор, аннотированная библиография, таксономия, распространение, биология, Diptera, Chloropidae, *Elachiptera*, *Gampsocera*, *Javanoscinis*, *Lasiochaeta*, *Melanochaeta*, новые комбинации

INTRODUCTION

I dedicate this article to the late Terry Wheeler (8.VI.1960 – 25.VII.2017), one of the few world experts on Chloropidae since his first of 37 publications on this family of flies in the year 1994.

When reviewing the article of Liu et al. (2017) published in this volume it became useful to put together all names of chloropids worldwide which had ever been included in the genus *Elachiptera* Macquart, 1835 at any one time. The main objective of this paper is to give a complete overview on all names formerly used in combination with the taxon *Elachiptera* and all valid world species in this genus (see section "The information on the Tables" for the details). Another aim of this publication is to update the taxonomic status of species wrongly placed into the genus *Melanochaeta* Bezzi, 1906.

The genus *Elachiptera* is included in a monophyletic tribe Elachipterini Lioy, 1864 (l. c.: 1317), junior name Elachipteri Lioy, 1895 (l. c.: 293), together with eight further genera (see Nartshuk, 2012: 4, but *Ceratobarys* Coquillett, 1898 was excluded as an accepted synonym of *Elachiptera* on page 13 in the same article). Cherian (2012a: 3) widened this concept by including two synonymous genera and the following three valid genera, *Allomedeia* Mlynarek et Wheeler, 2010, *Goniaspis* Duda, 1930 and *Parameijerella* Cherian, 1991. However, he has also used results of an unpublished M. Sc. thesis of Mlynarek (2009), which is permanently available in the internet. Nothing is cited or used of that thesis in the present article. Julia Mlynarek (pers. comm.) informed me that a changed version is submitted for publication. A long discussion about the difficulty of distinguishing the genera *Elachiptera*, *Gampsocera* Schiner, 1862, *Gaurax* Loew, 1863, *Macrostyla* Lioy, 1864, *Melanochaeta* and *Oscinella* Becker, 1909 was published by Duda (1932: 22, 33; 1934: 63–65). In the latter key to *Elachiptera* of the Oriental Region he lumped all those similar species in the genus *Elachiptera*. Other authors also tried to separate those genera which were difficult to distinguish in keys, namely, Corti (1909), Enderlein (1911), Becker (1910: 113; 1911b: 418; 1912a: 73; 1912b: 159), Séguy (1938), and Cherian (2012a). The more helpful keys to the relevant genera (Table 2) are listed here, in chronological order: Duda (1932–1933), Collin (1946), Sabrosky (1951), Andersson (1977), Nartshuk et al. (1970; English translation, 1989), Kanmiya (1983), Sabrosky (1987), Ismay & Nartshuk (2000), and Wheeler (2010). Keys to the Oriental and Australasian regions are missing since the antiquated keys of Becker (1911a: 85) and Malloch (1940).

MATERIAL AND METHODS

The author has collected 10488 published articles and books on Chloropidae. A file system facilitates the counting of the number of references to each scientific name of the family (i.e. 4198 valid and invalid taxa of the species group) and to each individual page of each publication on which a certain name is treated. This source makes it possible to count the number of references for each name of the world Chloropidae.

This paper intends to give access to the literature as quick as possible. Hence, in many places of the text I cite exact pages if it is time-consuming and difficult to locate the very information, especially for readers not speaking German. In particular, long books and articles by Enderlein, Duda and Becker may be confusing as they are written in a very complicate German. The method applies also to other voluminous books like Kanmiya (1983).

In this paper, author and year as part of each taxon often stand also for the cited reference itself.

In order to minimize rows in Table 1, the following abbreviations are used: for zoogeographical regions: Pa – Palaearctic, Na – Nearctic, Nt – Neotropical, Af – Afrotropical, Or – Oriental, Au – Australasian;

for the names of genera: *Cr.* – *Crassiseta*, *C.* – *Cyrtomomyia*, *E.* – *Elachiptera*, *G.* – *Gampsocera*, *L.* – *Lasiochaeta*, *M.* – *Melanochaeta*, *O.* – *Oscinella*.

RESULTS

INFORMATION ON THE TABLES

In all modern catalogues of the Chloropidae of the six main zoogeographic regions (Nartshuk, 1984; Sabrosky, 1965b, 1977b, 1980b, 1989; Sabrosky & Paganelli, 1984; Paganelli & Papavero, 2007) together with the listed synonyms, no sources are given to indicate where the synonymy was established. This gap is closed for the species listed in Table 1.

The main objective of this paper is to give a complete overview of all names formerly used in combination with the taxon name *Elachiptera* and all valid world species in this genus, namely, their junior synonyms, errors or misspellings of their names, justified or unjustified emendations, transfers to the actually accepted valid genus, stating in which genus a name has originally been described, listing of all genera in which a species or name was treated in the past, listing of the sources with their exact page on which a nomenclaturally important statement was first published, exact source with page number for further noted information, the zoogeographical region from which a species or its junior synonyms was described or successively reported.

The exact year of description or nomenclatural act is not always easy to find out as journals or single fasciculi of them often were later issued or distributed than printed on the flyleaf of the whole volume or on the separata, posted by the authors. Some of such cases are considered in the cited references, too. The year of the volume is set in round brackets behind the volume number in this case. An example is the Ethiopian synopsis of Becker (1911b); the species described in it often are cited with year 1910. Strobl (1902) published a Serbo-Croatian, slightly shorter version of his generally cited later paper (Strobl, 1904).

All species ever treated for a certain time in *Elachiptera* are also included in Table 1. Their actual systematic position is outlined with the relevant references.

The column "Pub." (= number of titles of published papers for each species) in Table 1 partially demonstrates how dominant a certain species is in the chloropid fauna of its range and it can give an impression as to how important a certain species may be economically, phytopathologically, faunistically, ecologically, taxonomically or because of peculiar morphological or behavioural details. It may be helpful in deciding if an intended research on a certain species could be promising. The section "Relation between the number of species and the number of belonging publications" and Table 3 focus on the content of this column.

TAXONOMIC TRANSFERS OF SPECIES

The separation of one of those genera mentioned in the introduction, *Lasiochaeta* Corti (= *Melanochaeta* auctt., nec Bezzi), is in part very problematical. Nartshuk & Tschirnhaus (2012) discussed some of its characters, e.g. tiny projections at the base of the scutellar setae, which can easily be overlooked or may be interpreted as small tubercles or homologues with the elongate scutellar projections typical for the genus *Elachiptera*. The interspecific variation in the shape and length of those structures does not allow a clear cut difference between these genera. Kanmiya (1983: 100) had already noted a lack of constant differences in the ground pattern of the male genitalia between these genera. Also, the surface structure of the scutum (= mesonotum), smooth or slightly punctate or rugose, acrostichals evenly distributed or in rows, do not distinguish the genera either. Many species of both taxa have been moved to and fro between the genera. Since the suppression of *Melanochaeta* Bezzi (Tschirnhaus

& Nartshuk, 2012; ICZN, 2014) in favour of *Oscinella* Becker, most species of the former genus *Melanochaeta* auctt. are not yet formally transferred to a valid genus. An exception is the type species *Lasiochaeta pubescens* (Thalhammer, 1898) transferred by Tschirnhaus & Nartshuk (2012). Five further species were already placed in a new combination with *Lasiochaeta* by Deeming & El-Dhafer (2012): *L. atricornis* (Adams, 1905), *L. scapularis* (Adams, 1905), *L. flavofrontata* (Becker, 1903), *L. umbrosa* (Becker, 1924), and *L. vulgaris* (Adams, 1905).

The research revealed that the following 28 taxa have to be formally removed from *Melanochaeta*, after the decision of the ICZN (2014) being a synonym of *Oscinella*. The author has not seen any type specimen and it may be that certain species will be transferred in the future to the genus *Gampsocera* Schiner, 1862 (see the chapter Outlook). Species of that *Elachiptera*-like genus have been treated by Cherian (2015), but a phylogenetic study based also on molecular data is necessary to distinguish them from *Elachiptera* or *Lasiochaeta* species.

A different shape of the first flagellomere (= third antennal segment) with anterodistal corner greatly extended (kidney-shaped), lighter coloration of thorax or spotted wings in males of some species and all frontoorbital setae more or less equal in length, actually are the features for separating *Gampsocera* from the other two genera. Following Andersson (1977) I re-investigated males of the type species *G. numerata* Heeger, 1858 collected by me in Germany and by Hideyuki Mitsui in Japan. Microscopic preparations of the mid femur revealed that the typical femoral sensory organ described by Ismay (1975) for males of 15 genera in the Oscinellinae is absent, while it is well developed in *Lasiochaeta pubescens* (8–11 tubercles in an irregular row with sensillae of double length of the diameter of a wart at the base of each sensilla). This result coincides with the observation of Ismay (1975) and Andersson (1977) that the organ is absent in the genus *Gaurax*, too. Emilia Nartshuk reviewed this paper and communicated that in the past she had studied the types of three species from China, described in the genus *Melanochaeta*. Based on the first three characters mentioned above she has concluded that they must be transferred to *Gampsocera*. She has agreed that those three new combinations are published here as follows (all pages on which the species are mentioned in the paper with their original description are added). So I propose the following **new combinations** with *Gampsocera*:

Gampsocera beijingensis (Ch. Yang et D. Yang, 1990): 202, 204.

Gampsocera separata (Ch. Yang et D. Yang, 1991b): 478–480, 482, 483.

Gampsocera separata fujianensis (D. Yang et Ch. Yang, 2004): 531, 539.

Gampsocera zhejiangensis (Ch. Yang et D. Yang, 1990): 202, 204.

A task to investigate all the other type specimens is not in sight. The transfer to *Lasiochaeta* in this article is only a formal act to give all those species a valid generic name. The taxon *Lasiochaeta* means the same as the former name *Melanochaeta* sensu auctorum, nec Bezzi, 1906. At the moment, a reexamination of the type material of all transferred 24 species is not necessary. Below, a preliminary diagnosis of the genus *Lasiochaeta* Corti, 1909 in the sense of Nartshuk & Tschirnhaus (2012) is put together based on different descriptions and on the examined original material of the type species *L. pubescens* and also on the material collected by me in the Afrotropical region. This preliminary diagnosis should ease a future study of the types of those 24 species, transferred below.

Genus ***Lasiochaeta*** Corti, 1909

Preliminary diagnosis. Thorax and abdomen never black but brownish or ochre or bicolorous; femora not thickened; mid femur in males with dorsal femoral organ; hind tibia with a distinct dorsal sensory area (tibial organ), without a strong spur; anepisternum (= mesopleuron) without

hairs; facial carina absent, face flat; each side of labellum with three pseudotracheae; postocellar setae erect, convergent or cruciate; ocellar setae upright (slightly proclinate) and divergent; scutum subshining, moderately dull, without deeply impressed grooves; scutellum of the *Oscinella*-type, much broader than long and not rugose above, disc convex, rounded apically (not trapezoidal) with slender long apical setae, those not approximated; only one or two subapical marginal scutellar setae; marginal setae of scutellum not born on distinct tubercles or projections, but tiny warts as their basis may be present; 1+2 notopleural bristles, the upper hind one weaker, a small upper anterior one partly present; vein R_{2+3} not exceptionally short; wing cell r_1 below end of vein R_1 not distinctly broader than cell r_{2+3} at the same level; head not much deeper than long, long axis of eye vertical; eye with pubescence; face in profile with rounded vibrissal angle not exceeding anterior edge of eye; frons with two or three strongly developed frontoorbital setae or setae-like hairs, in front of them, between and behind them much shorter frontoorbitals; frontal triangle not pitted, with at most one row of fine interfrontal hairs along side edge; frontal triangle smooth with moderate pruinescence, or slightly dusted with shining patches or edges, in tropical species partly shining; third antennal segment (= first flagellomere) rounded, its anterodistal corner not greatly extended as in *Gampsocera*, its depth not exceeding twice its length; arista subapical, never white, slightly or distinctly thickened and partly slightly flattened, densely long-haired, in tropical species these characters partly less distinct; body coloration in many species strongly variable, colour influenced by the temperature during larval development.

The following 24 species are listed here as **new combinations** with *Lasiochaeta* Corti, 1909 preventing their automatic transfer to *Oscinella*:

Lasiochaeta bimaculata (Ch. Yang et D. Yang, 1991b): 476–478, 482.

Lasiochaeta comoroensis (Sabrosky, 1979): 320, 326, 327.

Lasiochaeta diabolus (Becker, 1913): 155.

Lasiochaeta dubia (Lamb, 1918b): 386.

Lasiochaeta eunota (Loew, 1872): 104, 105.

Lasiochaeta freyi (Duda, 1934): 67.

Lasiochaeta grandipunctata (Ch. Yang et D. Yang, 1990): 201, 202, 204.

Lasiochaeta indistincta (Becker, 1911a): 132, 134.

Lasiochaeta jinghongensis (Ch. Yang et D. Yang, 1991b): 480, 481, 483.

Lasiochaeta kaw (Sabrosky, 1948): 365, 366, 371, 372.

Lasiochaeta kunmingensis (Ch. Yang et D. Yang, 1991b): 480, 481, 483.

Lasiochaeta lii (Ch. Yang et D. Yang, 1991b): 477–479, 482.

Lasiochaeta lindbergi (Sabrosky, 1957): 5–7.

Lasiochaeta longistriata (Ch. Yang et D. Yang, 1991a): 472, 473, 475.

Lasiochaeta melampus (Becker, 1912a): 82, 84, 105.

Lasiochaeta menglaensis (Ch. Yang et D. Yang, 1991a): 473, 475.

Lasiochaeta neimengguensis (D. Yang et Ch. Yang, 1990): 309, 310.

Lasiochaeta nigritibiella (Becker, 1911b): 434, 437.

Lasiochaeta opaca (Duda, 1932): 23, 30.

Lasiochaeta palmata (Loew, 1852): 661.

Lasiochaeta parca (Ch. Yang et D. Yang, 1991b): 481, 483.

Lasiochaeta pilosula (Becker, 1911b): 420, 421.

Lasiochaeta unimaculata (Ch. Yang et D. Yang, 1991b): 476–478, 482.

Lasiochaeta yunnanensis (Ch. Yang et D. Yang, 1991b): 479, 480, 483.

Sabrosky published 104 papers on Chloropidae between 1935 and 1999. He studied numerous chloropid types but did not always publish his findings. During the 17th International Congress of Entomology in Hamburg, 1984, he organized a workshop on Chloropidae and handed a draft of a "Check List of the Chloropidae of the World (Diptera)" to selected participants including

the author of this paper. His provisional list excluded a large number of synonyms in order not to prejudice decisions in the forthcoming edition of the Palaearctic Catalogue (Nartshuk, 1984). On the other hand, the list of Sabrosky included unpublished results of his taxonomic studies, among which were two taxa for the first time listed in the genus *Melanochaeta*, namely, *Oscinis basilaris* Adams, 1905 (Adams, 1905: 192) and *Oscinella nigripalpis* Becker, 1912 (Becker, 1912c: 248). Both are herewith transferred from *Oscinella* to *Lasiochaeta* and are listed as **new combinations**:

Lasiochaeta basilaris (Adams, 1905): 192.

Lasiochaeta nigripalpis (Becker, 1912c): 248.

THE NECESSITY OF SPLITTING *ELACHIPTERA CORNUTA* AND DESCRIBING NEW SPECIES

Splitting of some well-known species with many described subspecies or varieties becomes necessary on the basis of studies of the genitalia or on other criteria (e.g. the development of the diagnostic male mid femoral organ). The most abundant Palaearctic species of *Elachiptera*, *E. cornuta* (Fallén, 1820) with its seven synonyms and varieties (Table 1) is such a case. Recently Nartshuk & Andersson (2013: 92–94) addressed the problem. Ismay (pers. comm.), Ebejer & Kettani (2016) and the author (unpublished) stated that this abundant Palaearctic species has at least one unidentifiable sibling species differing in morphological details of the epandrium. Before describing it, a search and study of the types is needed to evaluate if this species already has a valid name unrecognized in its synonyms and varieties.

Moreover, after the field work in the Austrian Alps the author established that the high-alpine variety *E. cornuta nigripes* Strobl, 1894 deserves a full specific rank on the basis of coloration and morphological characters. The 21 publications (Table 1) using Strobl's name continue to treat this name as a variety of *E. cornuta*. Attention is needed as in the same paper (Strobl, 1894: 119) a new variety *Oscinis frit nigripes* Strobl, 1894, preoccupied by *Oscinis nigripes* Zetterstedt, 1848 (now in *Aphanotrigonum* Duda, 1932) is described. Repeatedly, among 119 articles on "*O. frit nigripes*" by the later authors the variety was used with a wrong author or a wrong genus. This puzzling fact complicates sorting the identical names into the correct genus. Luckily, Morge in his 14 publications on Strobl's collection in Admont (Austria) which treat Chloropidae, listed *E. cornuta nigripes* from Strobl's collection (Morge, 1978: 91, 129; see also Morge, 1976). Thus, it should be possible to compare Strobl's material with that collected now, a hundred years later. If the old and new material is not conspecific, the question arises whether one of the other synonyms of *E. cornuta* is conspecific with the unnamed species from my own collections from high altitudes.

One example from collecting chloropids worldwide using a photoeclector (Černý & Tschirnhaus, 2014) may demonstrate the dominance of *Lasiochaeta* species and most similar *Elachiptera* species and the necessity of continuing alpha-taxonomy. The author swept only ten minutes below a bridge in a river bed above gravel and water plants in Ethiopia (Province Welo, 25 km north of Desē, 11°22´96´´N, 39°38´53´´E, 1662 m a. s. l., 17.III.1995). The sample contained 2343 chloropids belonging to 38 species. Of those, 1400 specimens belonged to eight species of *Lasiochaeta* and *Elachiptera*: 586 specimens of *L.* 1 (undescribed), 301 of *L. scapularis*, 252 of *E. tarda*, 123 of *L. atricornis*, 106 of *L. flavofrontata*, 21 of *L.* 2 (undescribed), 6 of *E. simplicipes*, and 5 of *E. tecta*, respectively.

AN UNSOLVED *JAVANOSCINIS* PROBLEM

Meroscinis meijerei Becker, 1911 was repeatedly spelled *meyerei* by de Meijere himself in several papers, though he wrote his author name in the same articles without 'y'. In the years around 1900, he wrote

his name partly de Meyere, but his emendation is unjustified as during the year, when Becker (1911a) dedicated this species to him he always published under his name de Meijere. First, Enderlein (1911: 220, 204) transferred the Becker's species to the genus *Coryphisoptron* Enderlein, 1911, subsequently Bezzi (1919: 176–177) included it in *Rhodesiella* Adams, 1905 without citing Enderlein, and later Malloch (1931: 67–68) included it in *Macrostyla* Lioy, 1864 (nec Winnertz, 1846). Duda (1934: 71), apparently unaware of this, redescribed it again in the genus *Elachiptera*. Andersson (1977 [published 6.IV.1977]) also neglected all this and designated it as the type species of a new genus *Javanoscinis* Andersson, 1977. Again, not citing all previous generic placements, Sabrosky (1977b: 301 [published 4.XI.1977]) transferred it from *Meroscinis* Meijere, 1908, a junior synonym of *Rhodesiella*, to *Stenoscinis* Malloch, 1918. Thus, automatically *Javanoscinis* became a junior synonym of *Stenoscinis*. Nevertheless, Ismay (1986) treated both genera as valid in his short discussion on the *Javanoscinis* genus group. Cherian (2002: 321) restricted *Stenoscinis* with its North American type species to species in the New World, and left the Old World species of the genus in *Javanoscinis* with its Oriental type species "*Meroscinis" meijerei*. It is irrelevant to the aim of this paper to clarify the phylogenetic position of "*M.*" *meijerei*. In Table 1, line 103, the species is listed in *Javanoscinis* according to the taxonomic decision of Cherian (2002) fixing the latest unnecessary generic splitting by Andersson (1977). Except *Macrostyla* and *Meroscinis* the five further genera mentioned in this section are valid today.

RELATION BETWEEN THE NUMBER OF SPECIES AND THE NUMBER OF RELEVANT PUBLICATIONS

Hitherto the author has not seen a (simple) statistic data on the frequency scale between the number of publications about a certain taxonomic group of Diptera and the number of cross references to a certain species. This possibility was used here on the basis of scientific papers, book chapters and books (internet articles strictly omitted) dealing with Chloropidae, at least one single species of this family. This literature collection of 25234 titles was only focused on chloropids and the purely phytophagous leaf miner flies, Agromyzidae. A comparison may be added: though chloropids being much more harmful to agriculture, 10488 publications contain chloropid information but 16720 articles deal with agromyzid information. Table 3 contrasts the countings for the 195 names of Table 1 with the numbers of references dealing with each species. Table 3 is self-explanatory and the two examples in the legend are not repeated here. It is of special interest that most species are mentioned only a few times in the literature. A small peak shows that 24 species are dealt with in four publications each. As the other extreme example, the table shows that for few species much higher number of publications could be found, and more than 40 references for one species applying only for 17 species worldwide. All species with more than 100 relevant publications referring to them are European, a mirror for the number of dipterists collecting. *Elachiptera bimaculata* (Loew, 1845) is the most abundant species in the Mediterranean (mirroring holiday collecting), the brachypterous ant-like *E. brevipennis* (Meigen, 1830) (colour images in Nartshuk & Tschirnhaus, 2012) mirrors the interest in an exceptional fly on and near the ground of grassland, and *Lasiochaeta pubescens* mirrors the fact that this species being abundant in North Africa and in all Mediterranean countries is rapidly spreading northwards during the climate warming (e.g. Clemons, 2009; Kubík & Roháček, 2009; Tschirnhaus, 1982). *Gampsocera numerata* holds 88 publications as aestheticians among the entomologists like the nice iridescent picture wings of this tiny fly. Like Dek et al. (2016), they may want to report it for their country.

EXAMPLES OF LARVAL HABITATS OF *ELACHIPTERA*

Elachiptera species predominantly develop as phytosaprophagous larvae normally attacking monocot and more rarely dicot plants which are already infested by other phytophagous insect larvae or bacterial diseases. Ferrar (1987) gives a short worldwide overview of the rearings of 13 species and Nartshuk & Andersson (2013) listed many rearing results for *E. cornuta*. An exemplary case may be the Nearctic *E. nigriceps* (Loew, 1863) which is mentioned in at least 56 articles (Table 1): Coquillett (1898b) reported *Iris* (Iridaceae) to be attacked by larvae of *Pyrausta* Schrank, 1802 (Lepidoptera: Crambidae) as host substrate, Chittenden (1902) recorded "cabbage" (*Brassica* sp., Brassicaceae), Brown (1956) identified *Symplocarpus* (Araceae), and Eisemann et al. (2016) mentioned *Caltha* (Ranunculaceae) as larval substrates. All further 52 references to *E. nigriceps* indicate a puzzling picture of the biology of this species. But the "phytosaprophagy" of the larvae combines these host records from mono- and dicots making the meticulous collecting of concealed literature worthwhile. A multitude of applied entomological articles report the Palaearctic *E. cornuta* as an agricultural pest species. However, true phytophagy is rare in Chloropidae (Tschirnhaus, 2002) and, concerning *Elachiptera* spp., has only been presumed in the description of *E. orizae* Séguy, 1949 and possibly for *E. cornuta* var. *rufifrons* Duda, 1932 (Batalla, 1978). True zoophagy cannot be ruled out but is not yet confirmed for the genus. Smith (1855) observed *E. brevipennis* "on the back of a hemipterous insect, *Nabis subaptera*, in the act of inserting its ovipositor under the elytra" and the same brachypterous species has been reported from a colony of the ant *Lasius brunneus* Latreille, 1798 under a stone (d'Aguilar, 1945), where an aberrant life history may be presumed. Coprophagy may also occur in *Elachiptera* as *Ceratobarys eulophus* Loew, 1872 (today included in *Elachiptera*) has been reared from human excrement together with six further chloropid species (Kilpatrick & Schoof, 1956). The flies of European species repeatedly have been reported as hibernating below litter, in dry plant stems, in galls of several species of *Lipara* Meigen, 1830 and in weather-exposed bird nests. The author's studies with photoeclectors confirm such observations.

OUTLOOK

The main aim of this compilation was to include all primary taxonomic information on the taxon *Elachiptera* to facilitate future research. An examination of publications revealed that for the majority of the 81 species nearly nothing is known of their biology. Chloropid specialists, in informal discussions, agree on the need to reduce the number of genera by synonymizing several of them including those within the tribe Elachipterini as had been expressed already by Duda (1934: 63). In contrast to this agreement, the "*Javanoscinis* problem" outlined above is a bad example of the confusion in chloropid taxonomy and only comes to light after an extensive study of literature, while all authors previously omitted it. The phylogenetic position of the genus *Gampsocera* with 51 species similar in habitus, placed into the tribe Botanobiini Malloch, 1913 (p. 239, as Botanobiinae) seems to be justified. The discussed absence of the male femoral organ is a conclusive argument for a separate tribe Botanobiini close to the Elachipterini. The Botanobiini as a tribe was first proposed by Nartshuk (1983) and accepted in her later papers (Nartshuk, 2012: 3). Because of the lack of well definable "either ... or" characteristics in morphology, Andersson (1977) after a prolonged phylogenetic study on the last page of his book expressed a slightly pessimistic opinion about his own study: "The family could be too young and diversified to fit the phylogenetic method". The Acalyptratae are not yet known from

the Cretaceous Period and Tschirnhaus & Hoffeins (2009) demonstrated that a long series of 46 specimens of the amber inclusion *Protoscinella electrica* Hennig, 1965 from the Eocene agrees nearly exactly with the extant genus *Tricimba* Lioy, 1864, with the exception of two minute morphological differences. They wrote: "Nearly fifty million years passed without any new evolutionary process based on progressive developments concerning the ground pattern of bristle arrangement or other morphological details." This paper on one tribe of the family may be a spotlight on the unloved taxonomy background for phylogenetical insights.

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Table 1. Species-group names ever treated in *Elachiptera*, with a summary of taxonomic, nomenclatural and distributional data for each name.

Eleven columns from left to right: Column 1 (No.). Continuous numbering of rows, identical with right side column 11. Columns 2–6 (Zoogeographical regions). Zoogeographical regions from which the listed species and invalid names were described and from which they subsequently were recorded. Regions in **bold** belong to valid *Elachiptera* species. Column 7 (Pub.). The number of publications dealing with the species or name. For further explanations, see the Section "Relation between ..." and Table 3. Column 8 (Valid *Elachiptera* ...). Alphabetical list of names ever included originally or secondarily in *Elachiptera*. (1) Names in **standard font and bold** (with grey background) being valid in the genus *Elachiptera*. The original generic name is following in squared brackets, as well as species-group names, if originally proposed as subspecies names or varieties and later upgraded to species, are given in original combinations. Valid names of forms and varieties are not marked grey and not typed in bold. All varieties have been described before 1961, hence they are available

No.	Zoogeographical regions					Pub.	Valid *Elachiptera* spp. and spp. formerly in *Elachiptera*	Page
1			Nt			8	aberrans Schiner, 1868, Elachiptera	244
2				**Af**		1	**acanthellata** Deeming et Al-Dhafer, 2012, Elachiptera	16
3	**Pa**					2	**agricola** Beschovski et Krusteva, 1998, Elachiptera	330
4					Or	3	albitarsis Duda, 1934, Elachiptera	69
5					Or	7	albopilosa Becker, 1924, Melanochaeta	120
6		Na				20	aliena Becker, 1912a, Elachiptera	81
7		**Na**				4	**angusta** Sabrosky, 1948, Elachiptera	376
8		**Na**				8	**angustifrons** Sabrosky, 1948, Elachiptera	378
9		**Na**				5	**angustistylum** Sabrosky, 1948, Elachiptera	378
10	Pa					18	*annulipes* Roser, 1840, Crassiseta; see Nartshuk, 1994	63
11			Nt			8	apicalis Williston in Williston & Aldrich, 1896, Oscinis	422
12		**Na**				3	**aquila** Wheeler, 2003, Elachiptera	2
13					**Or**	4	**assamensis** Cherian, 1975, Elachiptera	16
14	Pa					45	*aterrima* Strobl, 1880, Elachiptera	34
15						1	*atra* Anonym in Séguy, 1950, Elachiptera	65
16				Af		12	atricornis Adams, 1905, Crassiseta	190
17		**Na**	**Nt**			11	**attenuata** (Adams, 1908), Elachiptera [Crassiseta]	152
18	**Pa**					23	**austriaca** Duda, 1932, Elachiptera	24
19				Af		6	basilaris Adams, 1905, Oscinis	192
20	Pa					6	*beckeri* Strobl, 1909, Oscinis	291
21					Or	4	*bengalensis* Cherian, 1975, Elachiptera	15
22	**Pa**					14	**biculiminata** Nishijima, 1956b, Elachiptera	40
23		Na				6	*bilineata* Adams, 1904, nec Bigot, 1892, Crassiseta	453
24	Pa					12	*bilineata* Bigot, 1892, Chlorops; not issued in 1891!	279
25	**Pa**					111	**bimaculata** (Loew, 1845), Elachiptera [Crassiseta]	49
26					Or	7	binotata Becker, 1911a, Gampsocera	135
27	Pa					22	*brachyptera* Dufour, 1833, Myrmemorpha	219

(ICZN, Article 15.2). (2) Names valid in other genera are typed in standard font. (3) Names which are junior synonyms, misspellings or unjustified emendations are typed in *italics*. (4) If mentioned in the original description, subgenera are set in round brackets.

Column 9 (Page). First page of original description. The pages in the keys, lists and discussions on previous pages in the same article or book are neglected. Column 10 (Valid taxon ...) [on right page]. Senior synonyms; after a full colon follows the source for the new synonymy; additional taxonomical notes; in squared brackets, all genera in which the species or name was additionally included in the time span between description and latest generic transfer. Partly the source for those inclusions is cited, too. Column 11 (No.) [on right page]. Continuous numbering of rows, identical with left page, column 1.

For abbreviations, see Material and Methods.

Valid name or senior synonym: Source of introduction / transfer. [Further genera in former combinations]	No.
Sagareocerus aberrans (Schiner, 1868): Paganelli, 2002: 17. [*Melanochaeta*, *Steleocerellus*, *Steleocerus*]	1
	2
	3
Gampsocera albitarsis (Duda, 1934): Sabrosky, 1977b: 286.	4
[*E. divisa* (Becker, 1911): Duda, 1930: 279; Duda, 1934: 69]; ***G. albopilosa*** (Becker, 1924): Sabrosky, 1977b: 287.	5
Oscinisoma alienum (Becker, 1912): Sabrosky, 1965b: 778; in many later references as *Oscinisoma*.	6
	7
	8
	9
E. cornuta (Fallén, 1820): syn. with *Cr. cornuta*: Loew, 1858a: 75, with *E. cornuta*: Schiner, 1863: 231.	10
Onychaspidium apicale (Williston in Williston & Aldrich, 1896): syn. with *Leptopeltastes apicalis*: Enderlein, 1911: 229. [*M.*]	11
	12
	13
Oscinella capreolus (Haliday, 1838): Nartshuk & Tschirnhaus, 2012: 48. [*Cr., M., Pachychaetina, Pachychoeta*]	14
Error and nomen nudum.	15
Lasiochaeta atricornis (Adams, 1905): Deeming & Al-Dhafer, 2012: 18.	16
	17
	18
Lasiochaeta basilaris (Adams, 1905), **comb. nov.** in this paper. [*Melanochaeta*, *Oscinella*]	19
Elachiptera scrobiculata (Strobl, 1901): Duda, 1932: 31. [*Oscinella*]	20
Gampsocera mutata Becker, 1911: Cherian, 2015: 31. [*Gampsocera*]	21
	22
Renamed: ***Elachiptera (E.) vittata*** Sabrosky, 1948.	23
E. bimaculata (Loew, 1845): Becker, 1910: 122, Collin, 1939: 150; Duda, 1932: 23, as var. of *bimaculata* Loew.	24
Transfer to *Elachiptera* by Strobl: 1898: 577.	25
Elachiptera binotata (Becker, 1911): Duda, 1934: 66; ***Gampsocera binotata*** Becker, 1911: Sabrosky, 1977b: 287.	26
Elachiptera brevipennis (Meigen, 1830): Schiner, 1863: 231–232, Nartshuk & Tschirnhaus, 2012: 44.	27

No.	Zoogeographical regions					Pub.	Valid *Elachiptera* spp. and spp. formerly in *Elachiptera*	Page
28					Or	6	*brevicornis* Brunetti, 1917, E.; types: Cherian 1975: 17	101
29	**Pa**					217	**brevipennis** (Meigen, 1830), Elachiptera [Chlorops]	159
30	**Pa**					32	**breviscutellata** Nartshuk, 1964, Elachiptera	315
31		**Na**				5	**californica** Sabrosky, 1948, Elachiptera (Elachiptera)	380
32	Pa					59	capreolus Haliday, 1838 (as masculine apposition), Oscinis	187
33				Af		2	comoroensis Sabrosky, 1979, E. [E. (Melanochaeta)]	326
34					Or	3	confluens Duda, 1934, Elachiptera	70
35			**Nt**			6	**coniotrigona** Duda, 1933, Elachiptera	204
36				**Af**		7	**conjuncta** (Adams, 1905), Elachiptera [Crassiseta]	190
37	**Pa**			**Af**	**Or**	733	**cornuta** (Fallén, 1820), Elachiptera [Oscinis]	6
38		**Na**	**Nt**			97	**costata** (Loew, 1863), Elachiptera [Crassiseta]	33
39		**Na**	**Nt**			4	**cultrata** Wheeler et Forrest, 2002, Elachiptera	2
40					Or	14	curvinervis Becker, 1911a, Gampsocera	135
41		**Na**				29	**decipiens** (Loew, 1863), Elachiptera [Oscinis]	40
42	**Pa**					100	**diastema** Collin, 1946, Elachiptera	147
43				Af		4	diabolus Becker, 1913, Melanochaeta	155
44					Or	5	dimidiaticornis Meijere, 1916, Gampsocera	55
45		Na				6	*dispar* Williston in Williston & Aldrich, 1896, Elachiptera	390
46					Or	11	divisa Becker, 1911a, Gampsocera	138
47				Af		9	dubia Lamb, 1918b, Elachiptera	386
48			**Nt**			5	**dubiosa** (Becker, 1916), Elachiptera [Gampsocera]	448
49				**Af**		4	**edwardsi** Sabrosky, 1951, Elachiptera (Elachiptera)	785
50				Af		4	ensifer Sabrosky, 1951, Elachiptera (Cyrtomomyia)	790
51		**Na**				18	**erythropleura** Sabrosky, 1948, Elachiptera (Elachiptera)	375
52		**Na**				25	**eulophus** (Loew, 1872), Elachiptera [Hippelates]	104
53		Na				27	eunota Loew, 1872, Crassiseta	104
54						1	*fascipes* Roser, 1840, Crassiseta	
55	Pa					24	*femoralis* Meigen, 1838, Chlorops	390
56				Af		7	femorata Johnson, 1898, Elachiptera	164
57			Nt			10	*festina* Becker, 1912b, Melanochaeta	182
58	Pa					8	*flavescens* Duda, 1932, Elachiptera [E. sibirica flavescens]	32
59		**Na**				7	**flaviceps** Sabrosky, 1948, Elachiptera	382
60		**Na**	**Nt**			21	**flavida** Williston in Williston & Aldrich, 1896, Elachiptera	417
61					Or	4	*flavipes* Duda, 1934, Elachiptera	66
62	Pa					17	*flaviventris* Roser, 1840, Crassiseta	63
63	Pa			Af		32	flavofrontata Becker, 1903, Crassiseta	151
64		**Na**				24	**formosa** (Loew, 1863), Elachiptera [Crassiseta]	32
65	Pa					4	freyi Duda, 1934, Elachiptera	67
66			**Nt**			2	**fucosa** Mlynarek et Wheeler, 2008, Elachiptera	44

Valid name or senior synonym: Source of introduction / transfer. [Further genera in former combinations]	**No.**
L. indistincta (Becker, 1911), **comb. nov.** in this paper. Syn. by Sabrosky, 1940: 422. [*G.*, *M.*: Cherian, 2012a: 3].	28
Transfer to *Elachiptera* by Macquart, 1835: 621; photos, history, syn. see: Nartshuk & Tschirnhaus, 2012.	29
	30
	31
O. capreolus (Haliday, 1838): Nartshuk & Tschirnhaus, 2012: 48. [*M.*, *Pachychaeta, Pachychaetina, Pachycheta, Pachychoeta*]	32
Lasiochaeta comoroensis (Sabrosky, 1979), **comb. nov.** in this paper. [*Melanochaeta*]	33
Gampsocera confluens (Duda, 1934): Sabrosky, 1977b: 287.	34
	35
Transfer to *Elachiptera* (*Elachiptera*) by Sabrosky, 1951: 787.	36
Transfer to *Elachiptera* by Schiner, 1863: 232–233.	37
Transfer to *Elachiptera* by Becker, 1912a: 78.	38
	39
E. curvinervis (Becker, 1911): Duda, 1934: 66; ***Gampsocera curvinervis*** Becker, 1911: Sabrosky, 1977b: 287.	40
Transfer to *Elachiptera* by Cole & Lovett, 1921: 337; as *E.* in Sabrosky, 1965b: 777. [*M.*: Becker, 1912a: 84]	41
	42
Lasiochaeta diabolus (Becker, 1913), **comb. nov.** in this paper.	43
E. dimidiaticornis (Meijere, 1916): Duda, 1934: 68; ***G. dimidiaticornis*** Meijere, 1916: Sabrosky, 1977b: 287.	44
Pseudogaurax anchora (Loew, 1866): Coquillett, 1898a: 48. [*Gaurax anchora*: Becker, 1912a: 75]	45
[*E. divisa* (Becker, 1911): Duda, 1930: 279; 1934: 69]; ***Gampsocera divisa*** Becker, 1911: Sabrosky, 1977b: 287.	46
Lasiochaeta dubia (Lamb, 1918), **comb. nov.** in this paper. [*Melanochaeta*]	47
Transfer to *Elachiptera* by Duda, 1930: 82.	48
	49
Cyrtomomyia ensifer (Sabrosky, 1951): Sabrosky, 1980b: 698.	50
	51
Transfer to *Elachiptera* by Wheeler & Forrest, 2002: 7.	52
Lasiochaeta eunota (Loew, 1872), **comb. nov.** in this paper. [*Melanochaeta*]	53
Error for *fuscipes* Roser, 1840 by Becker, 1910: 124.	54
Elachiptera cornuta (Fallén, 1820): Schiner, 1864: 61. Syn. already presumed by Loew, 1845: 49.	55
Pachylophus femoratus (Johnson, 1898): Sabrosky, 1951: 718.	56
Elachiptera sacculicornis (Enderlein, 1911): Duda, 1929: 166; Duda, 1930: 82 as *sacculicornis* var. *festina*.	57
Elachiptera sibirica (Loew, 1858): Always repeated as variety of *sibirica*, including Nishijima, 1956b: 43.	58
	59
	60
Described as variety of *notata*; ***Gampsocera notata*** Meijere, 1910: Sabrosky, 1977b: 288.	61
Elachiptera cornuta (Fallén, 1820): Schiner, 1863: 233.	62
Lasiochaeta flavofrontata (Becker, 1903): Deeming & Al-Dhafer, 2012: 18. [*M.*]. Types: Sabrosky, 1957: 6.	63
Transfer to *Elachiptera* by Aldrich, 1905: 636.	64
Lasiochaeta freyi (Duda, 1934), **comb. nov.** in this paper. [*Gampsocera*, *Melanochaeta*]	65
	66

No.	Zoogeographical regions					Pub.	Valid *Elachiptera* spp. and spp. formerly in *Elachiptera*	Page
67	Pa					8	*furcata* Perris, 1876, Elachiptera	194
68	Pa					20	*fuscipes* Roser, 1840, Crassiseta	63
69	**Pa**					14	**graeca** Becker, 1910, Elachiptera	124
70				Af		4	*grossiseta* Becker, 1910, Elachiptera	424
71	Pa					8	*hungarica* Becker, 1910, Elachiptera	125
72				Af		5	*incursitans* Becker, 1913, Cyrtomomyia	167
73					Or	3	*indica* Cherian, 1975, Elachiptera	13
74					Or	17	indistincta Becker, 1911a, Gampsocera	134
75					Or	6	infuscata Becker, 1911a, Gampsocera	138
76	Pa					19	*inornata* Corti, 1909, Gampsocera	154
77	**Pa**				**Or**	54	**insignis** (Thomson, 1869), Elachiptera [Oscinis]	605
78					Or	6	jacobsoni Becker, 1911a, Gampsocera	138
79					**Or**	1	**jammuensis** Cherian, 2012a, Elachiptera	7
80	**Pa**					13	**japonica** Nishijima, 1956a, Elachiptera	19
81		Na				5	kaw Sabrosky, 1948, Lasiochaeta [Melanochaeta]	371
82		**Na**				5	**knowltoni** Sabrosky, 1948, Elachiptera [E. (Elachiptera)]	381
83					Or	5	lanceolata Becker, 1911a, Gampsocera	136
84	Pa					4	*latefasciata* Duda, 1932, Elachiptera [E. bimaculata latefasciata]	23
85					Or	6	latipennis Becker, 1911a, Gampsocera	136
86	**Pa**					8	**lenis** Collin, 1949, Elachiptera	221
87				**Af**		14	**lerouxi** (Séguy, 1938), Elachiptera [Neoelachiptera]	360
88				Af		4	lindbergi Sabrosky, 1957, Elachiptera [E. (Melanochaeta)]	5
89	Pa					1	*lineata* Strobl in coll.: Morge, 1978	118
90					**Or**	4	**lividipennis** Duda, 1934, Elachiptera	70
91					Or	4	longicosta Cherian, 1975, Elachiptera	12
92		**Na**				12	**longiventris** (Johannsen, 1924), E. [M. (Doliomyia)]	89
93		Na				63	longula Loew, 1863, Crassiseta	34
94					Or	5	lunifer Becker, 1911a, Gampsocera	136
95					Or	5	luteiceps Meijere in Becker & Meijere, 1913, Gampsocera	299
96					**Or**	1	**luteohumeralis** Cherian, 2012a, Elachiptera	5
97					Or	5	luteopilosa Cherian, 1975, Elachiptera	14
98				**Af**		4	**lyrica** Sabrosky, 1977a, Elachiptera	114
99				Af		6	*maculinervis* Becker, 1910, Elachiptera	425
100					Or	9	maculipennis Becker, 1911a, Gampsocera	132
101				Af		4	maculipennis Sabrosky, 1951, Elachiptera (Cyrtomomyia)	792
102	**Pa**					108	**megaspis** (Loew, 1858), Elachiptera [Crassiseta]	74
103					Or	14	meijerei Becker, 1911a, Meroscinis; as meyerei (misspelling)	92
104			**Nt**			9	**melaena** (Becker, 1912b), Elachiptera [Melanochaeta]	181

Valid name or senior synonym: Source of introduction / transfer. [Further genera in former combinations]	**No.**
Elachiptera bimaculata (Loew, 1845): Corti, 1909: 135; Nartshuk, 1984: 228.	67
Elachiptera cornuta (Fallén, 1820): Loew, 1858a: 75; Schiner, 1863: 233; types: see Nartshuk, 1994: 157.	68
	69
Elachiptera tarda (Adams, 1905): Sabrosky, 1951: 783 (footnote).	70
Elachiptera brevipennis (Meigen, 1830): Duda, 1932: 25. [Soós, 1959: 8, treats it as a separate species]	71
Cyrtomomyia maculinervis (Becker, 1910): Sabrosky, 1951: 791, and 1980b: 698. [*Elachiptera*]	72
Disciphus peregrinus Becker, 1911: Cherian, 2012a: 3.	73
Lasiochaeta indistincta, **comb. nov.** in this paper. [*E.*: Duda, 1934: 70; *M.*: as "comb.n." by Cherian, 2012a: 3].	74
Elachiptera infusca (Becker, 1911): Duda, 1934: 68; ***Gampsocera infusca*** Becker, 1911: Sabrosky, 1977b: 287.	75
Gampsocera numerata inornata Corti, 1909: Duda, 1932: 29. ***Gampsocera numerata*** (Heeger, 1858).	76
Identification problems: see Nartchuk, 1962: 419. Redescription by Kanmiya, 1983: 89.	77
E. jacobsoni (Becker, 1911): Duda, 1934: 68; ***Gampsocera jacobsoni*** Becker, 1911: Sabrosky, 1977b: 287.	78
	79
	80
Lasiochaeta kaw (Sabrosky, 1948), **comb. nov.** in this paper.	81
	82
E. lanceolata (Becker, 1911): Duda, 1934: 65; ***Gampsocera lanceolata*** Becker, 1911: Sabrosky, 1977b: 287.	83
... and p. 25, line 25, [p. 25, line 7, also as *latifasciata*]. ***Elachiptera bimaculata*** (Loew, 1845).	84
E. latipennis (Becker, 1911): Duda, 1934: 67; ***Gampsocera latipennis*** Becker, 1911: Sabrosky, 1977b: 287.	85
	86
[*Elachiptera "lerouri"*: error in Sabrosky, 1941: 759]. *E.*(*Elachiptera*) *lerouxi*; Sabrosky, 1951: 788.	87
Lasiochaeta lindbergi (Sabrosky, 1957), **comb. nov.** in this paper. [*Melanochaeta*]	88
Nomen nudum in Morge, 1978: 118.	89
	90
Gampsocera longicosta (Cherian, 1975): Cherian, 2015: 39. [*Melanochaeta*: Yang & Yang, 1991b: 476, 482]	91
Elachiptera (*E.*) *longiventris* (Johannsen, 1924): Sabrosky, 1948: 372.	92
Eribolus longulus (Loew, 1863): Sabrosky, 1948: 368. [*Elachiptera*: Webster, 1899: 224]	93
Elachiptera lunifer (Becker, 1911): Duda, 1934: 67; ***Gampsocera lunifer*** Becker, 1911: Sabrosky, 1977b: 287.	94
E. luteiceps (Meijere, 1913): Duda, 1934: 68; ***Gampsocera luteiceps*** Meijere, 1913: Sabrosky, 1977b: 287.	95
	96
Gampsocera luteopilosa (Cherian, 1975): Cherian, 2015: 38. [*Melanochaeta*: Yang & Yang, 1991b: 479, 483]	97
	98
E.(*C.*) *tuberculata* (Adams, 1905); Sabrosky, 1951: 791; ***Cyrtomomyia tuberculata*** (Adams, 1905): Sabrosky, 1980b: 698.	99
E. maculipennis (Becker, 1911): Duda, 1934: 66; ***Gampsocera maculipennis*** Becker, 1911: Sabrosky, 1977b: 288.	100
Cyrtomomyia maculipennis (Sabrosky, 1951): Sabrosky, 1980b: 698.	101
Transfer to *Elachiptera* by Schiner, 1863: 233.	102
Elachiptera meijerei: Duda, 1934: 71; Sabrosky, 1977b: 301; ***Javanoscinis meijerei***: Andersson, 1977: 65. [See text!]	103
Transfer to *Elachiptera* by Duda, 1930: 82 as *E. sacculicornis* var. *melaena* (Becker, 1912).	104

No.	Zoogeographical regions					Pub.	Valid *Elachiptera* spp. and spp. formerly in *Elachiptera*	Page
105		Na				7	melampus Becker, 1912a, Melanochaeta	84
106			**Nt**			2	**melinifrons** Mlynarek et Wheeler, 2008, Elachiptera	46
107	**Pa**					3	**minima** Kanmiya, 1983, Elachiptera	93
108			Nt			11	*mitis* Williston in Williston & Aldrich, 1896, Oscinis	424
109				**Af**		3	**molybdaena** Séguy, 1957, Elachiptera	275
110					Or	15	mutata Becker, 1911a, Gampsocera	134
111		**Na**				57	**nigriceps** (Loew, 1863), Elachiptera [Crassiseta]	33
112	Pa					6	*nigriceps* Strobl, 1909, Elachiptera; preoccupied	291
113					Au	3	nigricolor Becker, 1916, Gampsocera	444
114		Na				23	nigricornis Loew, 1863, Crassiseta	34
115	Pa					21	*nigripes* Strobl, 1894, Elachiptera [E. cornuta nigripes]	123
116	Pa					18	*nigromaculata* Strobl, 1894 [E. cornuta nigromaculata]	123
117					Or	20	*nigroscutellata* Becker, 1911a, Elachiptera	99
118				Af		15	*nigroscutellata* Becker, 1912a, Elachiptera; preoccupied	80
119					Or	11	notata Meijere, 1910, Gampsocera	152
120					Or	4	nubecula Meijere, 1913, Gampsocera	298
121	Pa					7	*nuda* Duda, 1932, Elachiptera [E. cornuta nuda]	24
122	Pa					88	numerata Heeger, 1858, Chlorops	302
123					Or	5	*obscurata* Duda, 1934, Elachiptera	66
124					Or	2	*obscurior* Becker, 1910, Oscinella	425
125				**Af**		13	**occipitalis** Becker, 1910, Elachiptera	423
126					**Or**	3	**octoseta** Cherian, 1975, Elachiptera	11
127	Pa					13	opaca Duda, 1932, Elachiptera	30
128	Pa					2	*opposita* Strobl, 1909, Oscinis [in manuscript]	292
129	**Pa**					9	**orizae** Séguy, 1949, Elachiptera	23
130							*oryzae* Séguy, 1949, Elachiptera	-
131				Af		7	palmata Loew, 1852, Crassiseta	661
132						4	*palpata* Loew, 1862, Crassiseta; see Becker, 1910: 427	34
133				Af		9	pauliani Séguy, 1946, Elachiptera	6
134		**Na**				14	**pechumani** Sabrosky, 1948, Elachiptera [E. (Elachiptera)]	377
135	Pa					18	*pectoralis* Bezzi, 1895, Crassiseta	73
136		**Na**				12	**penita** (Adams, 1908), Elachiptera [Crassiseta]	152
137			Nt			9	*pilosa* Duda, 1930, Elachiptera	81
138				Af		4	pilosula Becker, 1910, Melanochaeta	420
139		Na				11	*planicollis* Becker, 1912a, Oscinella	114
140					Or	7	poeciloptera Becker, 1911a, Gampsocera	137
141		**Na**	**Nt**			5	**pollinosa** Sabrosky, 1938, Elachiptera	421
142					**Or**	6	**popovi** Nartshuk, 1962, Elachiptera	676
143	Pa			Af		155	pubescens Thalhammer, 1898, Elachiptera	167

Valid name or senior synonym: Source of introduction / transfer. [Further genera in former combinations]	No.
Lasiochaeta melampus (Becker, 1912), **comb. nov.** in this paper. [*Elachiptera* (*M.*) in Sabrosky, 1965b: 776]	105
	106
	107
E. flavida Williston, 1896: Becker, 1924: 121. [*Oscinella*: Becker, 1912b: 212; *Botanobia*: Malloch, 1913: 62]	108
	109
Gampsocera mutata Becker, 1911. [*Elachiptera*: Duda, 1930: 279]	110
E. nigriceps (Loew, 1863): Coquillett, 1898b: 72; Webster, 1899: 224. [*Elachiptera* (*Melanochaeta*)]	111
Elachiptera scrobiculata (Strobl, 1901): Becker, 1910: 124, as *trapezina*; Duda, 1932: 31; Nartshuk, 1984: 230.	112
E. nigricolor (Becker, 1916): Duda, 1934: 68; ***Gampsocera nigricolor*** Becker, 1916: Sabrosky, 1989: 654.	113
Monochaetoscinella nigricornis (Loew, 1863): Sabrosky, 1948: 371. [*Elachiptera*, *Melanochaeta*]	114
E. cornuta (Fallén, 1820): Since the description all 20 publications treat it as var., p. p. of *O. maura* (Fallén). [See text!]	115
E. cornuta (Fallén, 1820): Since the description all 19 publications treat it as variety.	116
E. sibirica (Loew, 1858): Kanmiya, 1983: 87; and/or *E. insignis* (Thomson); Problems: see Nartshuk, 1962: 419.	117
Cyrtomomyia punctulata (Becker, 1912): 645, as a new name. [*Gampsocera*]	118
E. notata (Meijere, 1910): Duda, 1934: 72; ***Gampsocera notata***: Sabrosky, 1977b: 288; Cherian, 2015: 19.	119
E. nubecula (Meijere, 1913): Duda, 1934: 66; ***G. nubecula*** Meijere, 1913: Sabrosky, 1977b: 288.	120
Elachiptera cornuta (Fallén, 1820): Nartshuk, 1984: 229.	121
Gampsocera numerata (Heeger, 1858): Schiner, 1862: 431. [*Elachiptera*: Duda, 1932: 22, 29]	122
Described as *Elachiptera notata* var. *obscurata*; ***Gampsocera notata*** Meijere, 1910: Sabrosky, 1977b: 288	123
Elachiptera insignis (Thomson, 1869)	124
Elachiptera (*Elachiptera*) *occipitalis*: Sabrosky, 1951: 786.	125
	126
M. opaca (Duda, 1932): Nartshuk et al., 1970: 408; ***L. opaca*** (Duda, 1932), **comb. nov.** in this paper.	127
Elachiptera scrobiculata (Strobl, 1901): Nartshuk 1984: 230; compare Morge, 1976: 406.	128
Types are not yet studied; the name may be a synonym of *Elachiptera cornuta rufifrons* Duda, 1932.	129
Elachiptera oryzae Séguy, 1949 is an unjustified emendation or error of several authors.	130
Lasiochaeta palmata (Loew, 1852), **comb. nov.** in this paper. [*E., M.*: Sabrosky, 1980b: 701]	131
Error for *palmata* Loew, 1852: Müller, 1881: 51–579. [*Elachiptera*, *Melanochaeta*, *Siphonella*: Bezzi, 1918: 54]	132
Pseudogaurax elachipteroides Sabrosky, 1945: Séguy, 1951: 307, following proposal of Sabrosky, 1951: 798.	133
	134
Elachiptera sibirica (Loew, 1858): Becker, 1910: 124 (footnote).	135
Elachiptera (*Elachiptera*) *penita* (Adams, 1908): Sabrosky, 1948: 380.	136
Elachiptera attenuata (Adams, 1908): Sabrosky, 1938: 424; Paganelli & Papavero, 2007: 19.	137
Lasiochaeta pilosula (Becker, 1910), **comb. nov.** in this paper.	138
Eribolus nanus (Zetterstedt, 1848: 2650), syn. by Sabrosky, 1965b: 778. [*Crassiseta, E., Melanochaeta*]	139
E. poeciloptera (Becker, 1911): Duda, 1934: 67; ***Gampsocera poeciloptera*** Becker, 1911: Sabrosky, 1977b: 288.	140
	141
English translation of the Russian article: see Nartshuk, 1962: 419.	142
Lasiochaeta pubescens (Thalhammer, 1898): Nartshuk & Tschirnhaus, 2012: 52.	143

No.	Zoogeographical regions					Pub.	Valid *Elachiptera* spp. and spp. formerly in *Elachiptera*	Page
144				Af		11	pulchra Becker, 1913, Cyrtomomyia	166
145				Af		15	punctulata Becker, 1912d, Elachiptera	645
146	Pa					7	*quadrilineata* Strobl, 1902, E. [E. bimaculata quadrilineata]	501
147	Pa					2	*quadrimaculata* Strobl, 1905, E. [E. bimaculata quadrimaculata]	-
148			**Nt**			2	**queposana** Mlynarek et Wheeler, 2008, Elachiptera	47
149		**Na**	**Nt**			11	**rubida** Becker, 1912b, Elachiptera	179
150			**Nt**			5	**rubrolimbata** Duda, 1930, Elachiptera	82
151	**Pa**					15	**rufescens** (Walker, 1871), Elachiptera [Oscinis]	345
152			**Nt**			5	**ruficollis** (Frey, 1919), Elachiptera [Melanochaeta]	23
153	Pa					40	*rufifrons* Duda, 1932, Elachiptera	26
154	Pa					2	*rufithorax* Duda, 1932, Elachiptera [E. pubescens rufithor.]	23
155			**Nt**	**Af**		17	**sacculicornis** (Enderlein, 1911), E. [Gampsocera]	237
156		**Na**				3	**salinaria** Sabrosky et Valley, 1987, Elachiptera	582
157	**Pa**					8	**sarda** Nartshuk, 2009, Elachiptera	548
158	Pa			Af		23	scapularis Adams, 1905, Crassiseta	189
159	**Pa**					101	**scrobiculata** (Strobl, 1901), Elachiptera [Oscinis]	233
160	**Pa**				**Or**	90	**sibirica** (Loew, 1858), Elachiptera [Cr.]	73
161	**Pa**			**Af**		21	**simplicipes** Becker, 1910, Elachiptera	425
162	**Pa**					8	**striatifrons** Péterfi, 1965, Elachiptera	47
163	**Pa**					16	**strobli** (Corti, 1909), Elachiptera [Crassiseta]	160
164							*stroblii* Corti, 1909, Crassiseta	-
165		**Na**	**Nt**			12	**sublineata** (Becker, 1912b), E. [Melanochaeta]	181
166	**Pa**					7	**submediterranea** Beschovski, 1981, Elachiptera	57
167				Af		3	tanganyikae Sabrosky, 1965a, Elachiptera [E. (C.)]	408
168				**Af**		11	**tarda** (Adams, 1905), Elachiptera [Crassiseta]	189
169					Or	7	tarsalis Becker, 1911a, Gampsocera	39
170		**Na**				3	**tau** Sabrosky, 1948, Elachiptera	374
171				**Af**		7	**tecta** Becker, 1916, Elachiptera	435
172	Pa					6	*tenuiseta* Frey, 1947, Elachiptera	69
173	Pa					15	*trapezina* Corti, 1909, Crassiseta	139
174				**Af**		8	**triangularis** Becker, 1912c, Elachiptera	245
175	Pa					4	*trifasciata* Duda, 1932, Elachiptera	23
176					Or	5	triplex Becker, 1911a, Gampsocera	133
177					Or	4	trisigillata Frey, 1923, Gampsocera	102
178	Pa					17	*trisulcata* (Becker, 1903), Crassiseta	152
179					Or	5	*trivialis* Becker, 1912c, Gampsocera	254
180					Or	4	*trivialis* Frey, 1923, nec Becker, 1912c, Gampsocera	102
181				Af		8	tuberculata (Adams, 1905), Crassiseta	191

Valid name or senior synonym: Source of introduction / transfer. [Further genera in former combinations]	No.
Formerly as *Elachiptera* (*Cyrtomomyia*): Sabrosky, 1951: 790; ***Cyrtomomyia pulchra:*** Sabrosky, 1980b: 698.	144
Cyrtomomyia punctulata (Becker, 1912): Sabrosky, 1980b: 698. See Sabrosky, 1948: 374.	145
Repeated description in German by Strobl, 1904: 563; ***E. bimaculata*** (Loew, 1845): since description always as variety.	146
Becker, 1910: 12, and Duda, 1932: 23–25, were in error; Strobl did not describe such a name in Wiener ent. Ztg.	147
	148
	149
	150
Transfer to *Elachiptera* by Becker, 1910: 121–122, as syn. of *E. bimaculata*; types: see Collin, 1949: 220–221.	151
Transfer to *Elachiptera* by Sabrosky, 1938: 426, as syn. of *E. sublineata*; Sabrosky & Paganelli, 1984: 13, as valid sp.	152
Elachiptera cornuta Fallén var. *rufifrons* Duda, 1932: Nartshuk, 2003: 30.	153
Lasiochaeta pubescens (Thalhammer, 1898): Nartshuk, 1984: 232.	154
E. sacculicornus: Duda, 1929: 166; *E. saeculicornis* Enderlein: Becker, 1912b: 182, unjustified emendation.	155
	156
	157
Lasiochaeta scapularis (Adams, 1905), Deeming & Al-Dhafer, 2012: 18.	158
Transfer to *Elachiptera* by Duda, 1932: 31. [*Oscinella*, *Oscinosoma* (sic!)]	159
Identification problems: see Nartshuk, 1962: 419.	160
Elachiptera (*Elachiptera*) *simplicipes*: Sabrosky, 1951: 788.	161
	162
Stat. nov. in Nartshuk, 2003: 655. Until 2002, as var. of *E. cornuta*. [*Elachiptera*: Becker, 1910: 121, 124]	163
Unjustified emendation of ***Elachiptera strobli*** (Corti, 1909) by Czerny (1909: 289) and Strobl (1910: 205).	164
Transfer to *Elachiptera* (*Melanochaeta*) by Duda, 1929: 166.	165
	166
Cyrtomomyia tanganyikae (Sabrosky, 1965): Sabrosky, 1980b: 698, as stat. resurr.	167
Elachiptera (*Elachiptera*) *tarda* (Adams, 1905): Sabrosky, 1951: 790.	168
E. tarsalis (Becker, 1911): Duda, 1934: 69; ***Gampsocera tarsalis*** Becker, 1911: Sabrosky, 1977b: 288.	169
	170
Elachiptera (*Elachiptera*) *tecta* Becker, 1916: Sabrosky, 1951: 787.	171
E. scrobiculata (Strobl, 1901): Nartshuk, 1984: 231, Nartshuk & Andersson, 2014: 316 [holotype destroyed].	172
Elachiptera scrobiculata (Strobl, 1901): Duda, 1932: 31.	173
	174
Elachiptera bimaculata (Loew, 1845): Duda, 1932: 23, as var. of *bimaculata*.	175
Transfer to *Elachiptera*: Duda, 1934: 65; ***Gampsocera triplex*** Becker, 1911: Sabrosky, 1977b: 288.	176
Transfer to *Elachiptera*: Duda, 1934: 66; ***Gampsocera trisigillata*** Frey, 1923: Sabrosky, 1977b: 288.	177
E. rufescens (Walker, 1871): Collin, 1949: 220; ***L. pubescens***: Becker, 1908: 201, 1910: 126, 1951: 782; Corti, 1909: 150.	178
E. mutata (Becker, 1911): Duda, 1934: 68; ***Gampsocera mutata*** Becker, 1911: Sabrosky, 1977b: 288.	179
Preoccupied; *E. freyi* Duda, 1934: 67; ***L. freyi*** (Duda, 1934), **comb. nov.** in this paper. [*Melanochaeta*]	180
E. (*Cyrtomomyia*) *tuberculata*: Sabrosky, 1951: 791; ***Cytomomyia tuberculata*** (Adams, 1905): Sabrosky, 1980b: 698.	181

No.	Zoogeographical regions					Pub.	Valid *Elachiptera* spp. and spp. formerly in *Elachiptera*	Page
182	Pa					8	*tuberculata* (Becker, 1907), Crassiseta; preoccupied	395
183	**Pa**				**Or**	231	**tuberculifera** (Corti, 1909), Elachiptera [Crassiseta]	132
184	Pa					8	*tuberifera* Becker, 1910, Elachiptera	123
185					**Or**	1	**typica** Cherian, 2012a, Elachiptera	9
186				**Af**		6	**ugandae** Sabrosky, 1951, Elachiptera (Elachiptera)	784
187	Pa			Af	Or	16	umbrosa Becker, 1924, Elachiptera	120
188				**Af**		4	**unimaculata** Becker, 1913, Elachiptera	154
189						4	unipunctata Becker, 1911a, Gampsocera	137
190	**Pa**					51	**uniseta** Collin, 1939, Elachiptera	150
191	**Pa**				**Or**	10	**viator** Nartshuk, 1971, Elachiptera	289
192		**Na**				7	**vittata** Sabrosky, 1948, Elachiptera	380
193	Pa			Af		20	vulgaris Adams, 1905, Crassiseta	191
194		**Na**				7	**willistoni** Sabrosky, 1948, Elachiptera (Elachiptera)	373
195	**Pa**					1	**xizangensis** Ch. Yang et D. Yang, 1991a, Elachiptera	473
Σ	**28**	**26**	**16**	**15**	**10**	**3971**	**81 valid *Elachiptera* species (varieties neglected)**	**Page**

Table 2. Genera in which species that are currently placed in *Elachiptera*, were described or in which they were treated a certain time.

Column 1 (No.). Continuous numbering of lines, identical with right side column 5. Column 2 (Valid ...). Alphabetical list of generic names (additional to *Elachiptera*) in which names of the species group had been placed before they were transferred to *Elachiptera* or after they had been moved from *Elachiptera* (invalid names are in *italics*). Column 3. First page of description in the relevant source.

No.	Valid or formerly used genera for names in Table 1	Page
1	*Botanobia* Lioy, 1864	1125
2	*Ceratobarys* Coquillett, 1898a	45
3	**Chlorops** Meigen, 1803	278
4	**Coryphisoptron** Enderlein, 1911	204
5	*Crassiseta* Roser, 1840	63
6	**Cyrtomomyia** Becker, 1913	166
7	**Disciphus** Becker, 1911a	98
8	*Doliomyia* Johannsen, 1924	89
9	**Elachiptera** Macquart, 1835	621
10	*Elachyptera* Agassiz, 1847	135
11	**Eribolus** Becker, 1910	127
12	**Gampsocera** Schiner, 1862	431
13	**Gaurax** Loew, 1863	35

Valid name or senior synonym: Source of introduction / transfer. [Further genera in former combinations]	No.
E. tuberifera Becker, 1910; syn. of ***Elachiptera bimaculata*** (Loew, 1845): Duda, 1932: 24.	182
Transfer to *Elachiptera* by Becker, 1910: 122.	183
New name for *E. tuberculata* Becker, 1907. Syn. of ***E. bimaculata*** (Loew, 1845): Duda, 1932: 24.	184
	185
	186
Lasiochaeta umbrosa (Becker, 1924): Deeming & Al-Dhafer, 2012: 18. [*Melanochaeta*: Kanmiya, 1983: 100]	187
	188
E. unipunctata (Becker, 1911): Duda, 1934: 67; ***Gampsocera unipunctata*** Becker, 1911: Sabrosky, 1977b: 288	189
Valid species according to genital features: Ismay, 1976: 101. [Syn. of *E. bimaculata* (Loew, 1845): Wendt, 1999: 140]	190
	191
New name for *Elachiptera bilineata* (Adams, 1904)	192
Lasiochaeta vulgaris (Adams, 1905): Deeming & Al-Dhafer, 2012: 17.	193
	194
	195
Valid names in bold; 75 valid species primary or secondary in *Elachiptera* are now in other genera	**No.**

Column 4 [on right page]: “Syn.” introduces the valid senior synonym. The names of type species in original combinations are following, but the publications of their descriptions and designations are not included in the references of this paper and are documented in Nartshuk (2012).

For abbreviations, see Material and Methods.

Senior synonyms or correct spellings; type species; notes. Relevant sources: see Nartshuk (2012)	No.
Syn. of *Gaurax* Loew, 1863; *Oscinis dubia* Macquart, 1835.	1
Elachiptera: Wheeler & Forrest, 2002: 2; *Hippelates eulophus* Loew, 1872; syn. neglected by Cherian, 2012b: 16.	2
Musca pumilionis Bjerkander, 1778.	3
Coryphisopron flavipes Enderlein, 1911.	4
Syn. of *Elachiptera* Macquart, 1835: Schiner 1863: 231; *Oscinis cornuta* Fallén, 1820.	5
Partly treated as subgenus of *Elachiptera*; *Cytomomyia pulchra* Becker, 1913.	6
Disciphus pereginus Becker, 1911.	7
Partly treated as subgenus of *Elachiptera*; *Melanochaeta longiventris* Johannsen, 1924.	8
Chlorops brevipennis Meigen, 1830.	9
Error or unjustified emendation of *Elachiptera* Macquart, 1835.	10
Eribolus sudeticus Becker, 1910.	11
Chlorops numeratus Heeger, 1858 (as *Chlorops numerata*).	12
Gaurax festivus Loew, 1863.	13

No.	Valid or formerly used genera for names in Table 1	Page
14	**Incertella** Sabrosky, 1980a	420
15	**Javanoscinis** Andersson, 1977	65
16	**Lasiochaeta** Corti, 1909	147
17	*Leptopeltastes* Enderlein, 1911	229
18	*Macrochaetum* Bezzi, 1894	343
19	*Macrochaetum* Corti, 1909	128
20	*Macrochetum* Rondani, 1856	127
21	*Macrochoetum* Bezzi, 1892	43
22	*Macrostyla* Lioy, 1864, nec Winnertz, 1846	1126
23	*Megachetum* Becker, 1910	119
24	*Melanochaeta* Bezzi, 1906	50
25	*Meroscinis* Meijere, 1908	172
26	*Mirmemorpha* Dufour, 1833	220
27	*Mirmemorpha* Rondani, 1841	281
28	**Monochaetoscinella** Duda, 1930a	107
29	*Myrmecomorpha* Agassiz, 1847	243
30	*Myrmecomorpha* Blanchard, 1840	629
31	*Myrmecomorpha* Corti, 1909	141
32	*Myrmemorpha* Dufour, 1833	218
33	*Neoelachiptera* Séguy, 1938	360
34	**Onychaspidium** Enderlein, 1911	196
35	**Oscinella** Becker, 1909	120
36	*Oscinis* Latreille, 1804	196
37	**Oscinisoma** Lioy, 1864	1125
38	*Oscinosoma* Enderlein, 1911	216
39	*Pachychaeta* Loew, 1845; nomen nudum in synonymy	50
40	*Pachychaeta* Bezzi, 1895, nec Loew, 1845	72
41	*Pachychaetina* Hendel, 1907	98
42	*Pachycheta* Becker, 1905, nec Portschinski, 1881	184
43	*Pachychoeta* Bezzi, 1895, nec Bigot, 1857	72
44	**Pachylophus** Loew, 1858b	121
45	**Pseudogaurax** Malloch, 1915	159
46	**Rhodesiella** Adams, 1905	197
47	**Sagareocerus** Paganelli, 2002	17
48	*Sagarocerus* Paganelli, 2002 in Nartshuk, 2012	32
49	**Siphonella** Macquart, 1835	584
50	**Steleocerellus** Frey, 1961	35
51	**Stenoscinis** Malloch, 1918	21
52	*Steleocerus* Becker, 1910	399

Senior synonyms or correct spellings; type species; notes. Relevant sources see Nartshuk (2012)	**No.**
Oscinella incerta Becker, 1912.	14
Meroscinis meijerei Becker, 1911, transfer to *Stenoscinis*: Sabrosky, 1977b: 301. See Cherian, 2002: 321. [See text!]	15
Elachiptera pubescens Thalhammer, 1898.	16
Syn. of *Onychaspidium* Enderlein, 1911; *Leptopeltastes longiscutellata* Enderlein, 1911.	17
Unjustified emendation of *Macrochetum* Rondani, 1856.	18
Error for *Macrochetum* Rondani, 1856 by different authors. See O'Hara et al., 2011: 110.	19
Oscinis cornuta Fallén, 1820. Designation by Coquillett, 1910: 564.	20
Unjustified emendation of *Macrochetum* Rondani, 1856.	21
Syn. of *Rhodesiella* Adams, 1905; *Chlorops plumiger* Meigen, 1830.	22
Error for *Macrochetum* Rondani, 1856.	23
Syn. of *Oscinella* Becker, 1909: ICZN, 2014. Formerly as subg. of *Elachiptera*; *Oscinis capreolus* Haliday, 1838.	24
Syn. of *Rhodesiella* Adams, 1905: Bezzi, 1919: 175; *Meroscinis scutellata* Meijere, 1908.	25
Error for *Myrmemorpha* Dufour, 1833.	26
Error for *Myrmemorpha* Dufour, 1833.	27
Oscinis anonyma Williston, 1896.	28
Unjustified emendation of *Myrmemorpha* Dufour, 1833.	29
Unjustified emendation of *Myrmemorpha* Dufour, 1933.	30
Unjustified emendation of *Myrmemorpha* Dufour, 1833.	31
Myrmemorpha brachyptera Dufour, 1833.	32
Syn. of *Elachiptera* Macquart, 1835: Sabrosky, 1941: 759; *Neoelachiptera lerouxi* Séguy, 1938.	33
Onychaspidium sexdentatum Enderlein, 1911.	34
Musca frit Linnaeus, 1758; compare ICZN (2014).	35
Syn. of *Chlorops* Meigen, 1803; *Musca pumilionis* Bjerkander, 1778.	36
Chlorops vitripennis Meigen, 1830, a junior syn. of *Chlorops cognatus* Meigen, 1830.	37
Further pages in Enderlein (1911) are 187, 243. Unjustified emendation of *Oscinisoma* Lioy, 1864.	38
Elachiptera Macquart, 1835; Nartshuk, 2012: 13, erroneously as a valid genus; *Oscinis cornuta* Fallén, 1820.	39
Unjustified emendation of *Pachychoeta* Bezzi, 1895, nec Bigot, 1857	40
Syn. of *Oscinella* Becker, 1909; *Oscinis capreolus* Haliday, 1838.	41
Error or emendation; preoccupied; used for *E. aterrima* Strobl, 1880 and *L. pubescens* Thalhammer, 1898.	42
Syn. of *Oscinella* Becker, 1909; *Elachiptera aterrima* Strobl, 1880 (= *Oscinis capreolus* Haliday, 1838).	43
Pachylophus frontalis Loew, 1858.	44
Gaurax anchora Loew, 1866.	45
Rhodesiella tarsalis Adams, 1905.	46
Elachiptera aberrans Schiner, 1868.	47
Error; see *Sagareocerus* Paganelli, 2002.	48
Madiza oscinina Fallén, 1860. Compare ICZN (1978) for suppression of *Madiza oscinina* in Milichiidae.	49
Steleocerus tenellus Becker, 1910.	50
Oscinis longipes Loew, 1863.	51
Syn. of *Mepachymerus* Speiser,1910; *Steleocerus lepidopus* Becker, 1910. [=*Mepachymerus baculus* Speiser, 1910]	52

Table 3. Relation between the number of species (**A**) and the number of relevant publications (**B**).

Example: The first pair of numbers means that for eight species only one publication is available, namely the original description, e.g. *E. typica*. The last pair of numbers means that for one species, *E. cornuta*, 733 references are available. (The unjustified emendations of *E. oryzae* and *E. stroblii* are counted with their valid spellings).

A Species	8	9	11	24	17	14	15	13	6	2	8	5	3	6	5	2	4	4	1
B References	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
A Species	4	3	1	3	2	1	0	1	0	1	0	0	2	0	0	0	0	0	0
B References	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
A Species	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
B References	39	40	45	51	54	57	59	63	88	90	97	100	101	108	111	155	217	231	733